

## CLAIMS

What is claimed is:

1. Apparatus comprising a perfusion fluid loop for maintaining an *ex vivo* organ in viable condition for transplantation, said perfusion fluid loop comprising:
  - an organ container for receiving an organ to be transported,
  - a bubble remover for removing gas bubbles from perfusion fluid disposed in said perfusion fluid loop,
  - an oxygenator for supplying oxygen to and removing carbon dioxide from perfusion fluid disposed in said perfusion fluid loop, and
  - a free radical scavenger located in said perfusion fluid loop and positioned to be in contact with a perfusion fluid in said perfusion fluid loop.
2. The apparatus of claim 1, in which said free radical scavenger comprises an antioxidant material and a time-release dispenser for releasing said antioxidant material into perfusion fluid over a period of time.
3. The apparatus of claim 2, in which said time-release dispenser is a body of organosiloxane material in which a free radical scavenger is embedded.
4. A perfusion fluid comprising a free radical scavenger in an amount effective to increase the length of the period during which an *ex vivo* organ will remain viable in said perfusion fluid.
5. The perfusion fluid of claim 4, in which said free radical scavenger comprises Adenosine.
6. A composition comprising a free radical scavenger in time-release form adapted for releasing said scavenger into a perfusion fluid over a period of time.

7. The composition of claim 6, in which said time-release composition comprises particles of an organosiloxane material in which a free radical scavenger is dispersed.